SECOND LANGUAGE ACQUISITION AND THE ROLE OF CORRECTIVE EVIDENCE[1]

Abstract*: The study investigated the role of negative feedback in facilitating language acquisition. Specifically it studied whether or not negative feedback can help trigger grammatical reorganization. Data were collected from 196 intermediate level Iranian students of English. A pre-test/ post-test procedure using a parallel design was used to assess the effect of two different types of instruction. Statistical analyses (two one-way ANOVAs and five two-sample t-tests were conducted on the scores the participants received on their tests.*

Results showed that the participants who received negative feedback performed significantly better than those who received no negative feedback. This finding lends support to the argument of White's (1970) learning paradigm concerning the difference between concept formation and concept identification and also to Bley-Vroman's (1986) hypothesis model that argues that the only data to force the required organization of L2 system is negative evidence.

Keywords*: second language acquisition, error correction, TEFL, negative feedback.*

Introduction

Any theory of language learning has to acknowledge the role that input plays in the process of learning, but the form and type that it needs to take for learning to occur is still a controversial issue. Those who hold up to a nativist position of acquisition support the idea that positive evidence is all that is required for acquisition to happen (Chomsky, 1968) while the interactionists see positive evidence as insufficient and propose a role for both positive and negative evidence (Labov, 1969). The former believe that human knowledge develops from structures, processes and ideas that are in the mind at the birth whereas the latter hold the idea that social context of language and other persons with whom a person interacts influence language acquisition.

Positive Evidence vs. Negative Evidence

Positive evidence is the input or models that learners receive about the target language in a natural linguistic environment. It can be provided as authentic input, like what occurs in naturalistic conventions, or as modified input, like what occurs in foreigner talk discourse or teacher talk (Chaudron, 1988; Sokolov and Snow, 1994). It may consist of descriptive information about a form or an utterance. It comprises actually occurring sequences, i.e., sentences of the language. Various options exist for positive evidence including plentiful exemplars of the target feature without any pre-planned device to draw attention to it. In contrast, negative evidence provides information about what is not possible in the target language (Lightbown & White, 1987; Long, 1996; White, 1990). It may consist of direct and indirect information about the impossibility and ungrammaticality of a form or an utterance. It may include explicit grammatical explanation (i.e. overt error correction) or implicit feedback such as confirmation check and recast.

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L1 Acquisition and Negative Evidence

According to Pinker (1989), Grimshaw & Pinker (1989) and Beck & Eubank (1991), for the negative evidence to be incorporated into a theory of language, not only must it be shown to exist, and to be both useful too and used by the learners, but also it must be shown that acquisition cannot occur without it.

Pinker (1989) points out that by far none of the studies have succeeded in showing that negative evidence is both equally and unambiguously available for all learners of a language. Moreover, a variety of documented sources indicate that children tend either to confuse or to ignore altogether the caretakers' attempts at correction (Wexler & Culicover, 1980; Moulton & Robinson, 1981; Brown & Hanlon, 1970).

The lack of reliable and sufficient studies on the effect of negative evidence on children language acquisition motivates the argument that children must be endowed with certain 'principles' which allow them to advance the knowledge of ungrammaticality, and which prevent them from making incorrect hypotheses. The common claim is that for the knowledge system of an L1 to grow, the child only needs exposure to instances of that particular language. In other words, the child learns the language through contextualized utterances within the primary linguistic data (in Schwart's term) in his/her immediate language environment. It is, indeed, the particular form of innate linguistic knowledge (the particular form of UG) that helps the native speakers to come to know which utterances are and which utterances are not allowed in their language.

Almost all L1 learning theories assume that in L1 acquisition negative evidence does not seem to have any place in acquisition and that one can succeed in learning his/her native tongue without it. Pinker (1989) mentions that even the malformed utterances produced by children should not be considered as violations of UG, but just language particular variations which are specifically allowed by UG.

The conclusion to be drawn, to our present knowledge, is that within the 'Principles and Parameters' paradigm, L1 acquisition is assumed to proceed on the basis of naturalistic positive evidence interacting with innate principles of UG. The input data merely trigger the properties of UG and cause UG parameters to be set; however, it does not hold a change-making role in the properties of such parameters.

SLA and Negative Evidence

If one takes the position that second language acquisition, similar to first language acquisition, takes place within the constrains of universal grammar, a question of interest is whether the input within the positive evidence has the same role in acquisition; i.e. it interacts with innate principles of universal grammar. In other words, can properties of UG only be triggered by positive L2 input or else?

It is still widely debated theoretically if external efforts to 'teach' L2 knowledge can truly influence learners' developing L2 competence. Within this debate, some theorists (Krashen, 1985, 1999; Schwartz, 1993; Paradis, 1994; Young-Scholton, 1999) hold that true linguistic competence is not affected by instruction, and that the only kind of information available, or at least usable, for both L1 and L2 acquisition is positive evidence.

Conversely, according to some other theorists, the idea that developing L1 grammar never finds itself in need of negative evidence for generalization does not necessarily extend to SLA. White (1987, 1990) argues that learners of L2 may adopt parameter settings which generate language that is wider than L2. Whenever this happens, L2 utterances will simply confirm the inappropriately adopted parameter

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setting and UG cannot fully interact with adopted parameter setting. The only evidence, thus, to help reset L2 parameters in such circumstances should be something other than positive input. Bley-Vroman (1986) and White (1987) argue that the only data to force the required organization of L2 system is negative evidence. It has been argued that without such data, the L2 acquirer will be stuck with an incorrect system (incorrect when it is looked from L1 point of view).

It appears that the most efficient way to get the L2 acquirers to create closer approximations of the right hypotheses (right with respect to L1) is to supplement Primary Linguistic Data with negative data. Thus, negative data would seem to work efficiently in limiting the hypotheses that L2 acquirers make, so that they will be able to capture all the linguistic facts including what is possible and what is not. The more information the L2 acquirer has to work with, the greater the chance that the right hypothesis will eventually be created.

L2 learners sometimes make incorrect generalizations (in many cases based on their mother tongue) that cannot be disconfirmed by positive evidence only. Error correction – a form of negative evidence - is most common in L2 learning situations.

In a number of experimental studies, attempts have been made to control fairly precisely the kind of input available to L2 learners, and to determine whether negative evidence or naturalistic positive evidence can lead to parameter resetting in L2 classroom (Trahery & White, 1993; White, 1991a, 1991b). In these studies experimental groups get a particular input, whereas the control groups do not. Thus, it allows one to determine precisely what the effects of different kinds of input are. For example, White (1991a, 1991b) indicates that francophone learners of English incorrectly assume that English, like French, allows raising of the main verb over an adverb. This is one of properties associated with the verb raising parameter proposed by Pollock (1989). The lack of verb raising in English brings about a learnability problem for French learners of English concerning adverb placement. White argues that these learners have adopted the L1 parameter setting. The errors are such that negative evidence will be required to eliminate them because SVAO order is non-occurring in English. Results show the only the group that received negative evidence on adverb placement revealed knowledge of the impossibility of SVAO order I English. White also compared the short-term and long-term effects of explicit input and concluded that negative evidence has short-term effect rather than long-term effect. Schwartz & Gubala-Ryzak (1993) argue that linguistic behavior of the subjects in Whit's study show that verb movement parameter was never implicated. Negative evidence does not lead to parameter resetting, and apparent positive effects of negative evidence suggest that a different type of learning might have been involved rather than acquisition via UG. They maintain that negative evidence White's subjects received only resulted in a superficial pattern-matching state. Furthermore, the absence of any long-term effect indicates that negative evidence did not result in the restructuring of the interlanguage grammar. In her later article, however, Schwartz (1993) appears to grant a more important role for negative evidence. In the conclusion, she states that in order to achieve a native-like linguistic behavior, learned linguistic knowledge needs to be created to supplement competence in certain specific areas.

Carroll & Swain (1993) investigated the effects of various types of negative feedback on the acquisition of English dative alteration by 100 adult Spanish-speaking learners of English as an L2. The results of their studies indicated that all of the groups that received negative feedback performed significantly better that the control group. Their study also found that the group that had been given explicit rules performed

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significantly better that all other groups. Based on these findings Carroll & Swain concluded that their study lends empirical support to the claim that negative feedback can help adult L2 learners learn abstract linguistic generalizations.

Carroll, Roberage & Swain (1992) also show limited positive effects of negative feedback. In another study, Trahery & White (1993) looked at whether an input flood of positive evidence alone is sufficient to lead to parameter resetting. They show that supplying positive evidence in the L2 classroom does not trigger the appropriate L2 value of the parameter. The results suggested that positive evidence could not server to preempt L1 parameter setting in this case.

There is still no consensus on how teachers can best react to their students' errors or at what stage in the course of SLA such feedback should be given. Krashen (1984), for instance, has argued for a very minor role for formal grammar teaching and error correction, because, from his theoretical perspective, the conscious learning targeted by this type of instruction serves only as a Monitor. He favors delaying feedback on errors until learners pass the elementary stages of learning, and offers intensive practice as a long-range cure for the immediate errors. Others, however, see a more positive role for error correction as a means of promoting competence. Using Burt and Kiparsky's (1972) global and local taxonomy, Henrickson (1978) attempted to control for error gravity, but his treatments resulted in insignificant reduction of errors. Bailystock (1981) proposed that explicit grammar and error correction would play an important role in the development of target language competence. The conscious type of learning, or the attention to the outer form of language – what was later called consciousness-raising by Scharwood-Smith (1980, as cited in Rutherfor & Sharwood-Smith, 1985) states that "instructional strategies which draw the attention of the learner to specially structural regularities of the language, as distinct from the message content, will under certain conditions significantly increase the rate of acquisition over and above the rate expected from learners acquiring the language under natural circumstances where attention to form may be minimal and sporadic." (p. 275)

The literature on negative feedback is not very large. Often the studies would have concentrated on another aspect of feedback, and the evidence on the negative feedback has been obtained subsidiary to the main findings. In one experiment, Lalanda (1982) found that students who used error code when revising their compositions made significantly better gains than a group whose compositions were corrected directly by the teacher. In a similar study, Smeke (1984) found that overt correction of student writing tended to have in significant effects on the quality of compositions and on student attitude toward writing. The findings of these studies supported Corder (1981) and Brumfit's (1980) hypothesis that if learners are forced to approach error correction as a problem solving activity, they will retain feedback. Brumfit also identified six different methods of providing feedback on student errors, ranging from locating an error by using error code to simply asking students to revise their performance without any feedback at all. In a similar study, Robb. *et al* (1986) reported four methods of providing feedback on written errors. These methods differ in the degree of salience provided to the writer in the revision process. Rob and his associates came up with the result that EFL learners would assimilate only a small proportion of corrective feedback into their grammatical system.

The role of negative evidence (negative feedback in instructed SLA) in facilitating SLA is a significant issue in SLA research. The main question this paper attempts to grapple with is whether or not negative feedback can help trigger

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grammatical reorganization. The data reported here are from my MA dissertation I conducted some years ago at Esfahan University.

Earlier studies of negative feedback indicated that it was ineffective with second language learners. However, recent studies indicate that negative feedback can provide the learners with information and data that promote their language acquisition. Oliver (2000) lists the age-related studies of negative evidence with different age groups and in classroom context. In this study, Oliver collected data from 30 classrooms (20 adult and 10 child ESL classes) and 32 native speaker-nonnative speaker dyads (16 adult and 16 child dyads). She found no significant differences in the use of negative evidence in either context (teacher-fronted or pair-work tasks). In each case, learners were consistently and frequently provided with negative evidence, and they used the feedback in subsequent opportunities to produce language. There was significant difference in the patterns of interaction when it came to age, however. For example, adults provided negative evidence more often than children; children were much more tolerant of non-native like pronunciation in the L2 and thus did not provide negative evidence.

Methodology

Subjects: The informants whose data are reported here comprise two groups of 30 selected from four original groups of 56, 45, 40 and 55. They were all native speakers of Persian with a median age of 23, studying English as a general course in four classes at the University of Yazd. In order to select a homogeneous group sample a test of proficiency (TOEFL) was given to all students. 132 of the subjects were rated at the intermediate level of proficiency, from which 120 freshers were selected and formed into four groups of 30. Two of the groups formed the experimental and the control groups. The participation of the remaining groups was to help to measure the correlational equivalence between the pretest and the post-test.

Testing Materials: Two multiple-choice tests of 40 items were prepared to serve the pretest and the post-test. The pretest included four grammatical features of English; tense, relative clause, preposition and WH-question. The post-test was parallel in nature to the pretest, i.e. it included the same four grammatical features. The correlational equivalence measure indicated the reliability of the two tests (74%).

Teaching materials: Two manuals were prepared to be given to the subjects. The manual for the control group contained the stem of each 40 questions with the correct answer inserted, thus providing only the positive evidence. The manual for the experimental group included every part of that of the control group plus the incorrect forms of each item. The incorrect forms were used to serve as the negative evidence.

Procedure: The experiment consisted of three correlative phases: a pretest, a period of remedial instruction and a post-test. 196 students in four classes of 56, 45, 40 and 55 were taken through a test of proficiency which was conducted by English Department at the University of Yazd. 120 from the 196 participants, who were rated at the intermediate level, were then selected for the purposes of the experiment.

A pretest/post-test procedure using a parallel design was used to assess the effect of two different types of instruction. The pretest was given to the 56 and 55 member classes from each of which 30 students, who had been rated at the intermediate level, were selected as the experimental and control groups. The pretest was basically used as an elicitation procedure through which syntactic errors were pinpointed. It is to be noted that only the main subjects' scores were calculated although 111 students were taken through the pretest and were provided with the manuals.

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After the administration of the pretest, the instruction period began. A week after a week from the pretest, the subjects were taken through the post-test. The insertion of a week interval could, on the one hand, increase the likelihood of the learned language items, and reduce the possible influence of other instruction materials in other courses, on the other hand.

In order to determine whether any effects measured at the post-test would disappear immediately or endure in the memory, the post-test was administered once more a week after the first. The administration of the second post-test was not announced in advance.

Scoring Procedure: As it was decided to be hard on the predictions of the study, the raw scores were first submitted to two one-way ANOVA's with the acceptance level at .05. The result showed a statistical significance of difference among the means. The raw scores were then submitted to five two-sample t-tests. The first two-sample t-tests revealed no significant difference between the experimental and the control groups ($df = 57$, $t=0.36$, $p=0.72$). Thus, the informants could be considered to be almost at the same performance level prior to the treatment. The second two-sample t-test showed a significant effect for the instruction (positive evidence and negative evidence together) aimed by the study ($df = 57$, $t=3.46$, $p=0.009$). The third two-sample t-test also showed a significant remaining effect for the instructed used ($df=57$, $t=2.53$, $p=0.014$). The fourth and fifth two-sample t-tests were used to compare the means of the control group's and experimental group's scores on the pretest and the first post-test. It revealed that both groups scored higher after their treatments (for the control group, $df=57$, $t=5.37$, $p=0.000$; for the experimental group, $df=57$, $t=2.19$, $p=0.033$).

Discussion

An important issue concerning language growth is that part of the knowledge that tells learners what kinds of sentences are not possible in the language. It has been argued that the development of such knowledge is necessary to improve one's linguistic repertoire. In fact, it is the way that hypothesis testing works in accumulating knowledge. In other words, the learner needs to be armed with the knowledge that helps him differentiate phenomena of one class from other phenomena not in that class.

In her learning paradigm, White (1970) distinguishes between concept formation and concept identification. Concept formation involves learning to categorize individual things as instances of one common type, which in turn, involves identifying salient properties of the category. Concept identification involves recognizing what concept is to performing some mental task. In other words, along side the knowledge to differentiate phenomena, one also acquires knowledge to identify concepts which lead to problem solving. With respect to the operation of hypothesis-testing model, we can think of a positive/negative dichotomy for input enhancement. As it was explained earlier, the learner output which was the distracters chosen by the subjects on the pretest has functioned as the negative evidence. This negative evidence along with the positive evidence has improved the process of concept formation in the learners.

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